JOURNAL

OF AMERICAN INSURANCE

JULY, 1959 Vol. 35—No. 7

Preview of Nuclear Power, World-Wide Competition? Insurance Has Plenty

Fire Protection: More for Your Money

Rendezvous With Nixon in Russia

Requiem for the Old Swimmin' Hole

Ashes Trip Many an Arsonist

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JULY, 1959 Vol. 35—No. 7

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OUR COVERS

HERE ON THIS SCENE and in these buildings *(front cover)*, the U. S. was created 183 years ago this July 4 when Congress voted favorably upon the final form of the Declaration of Independence.

The main unit, then the Pennsylvania Statehouse, now famous as Independence Hall, was, and is, one of the most beautiful administration buildings of American colonial times. In 1776 it was on Philadelphia's outskirts.

Today, *(back cover)* a newly created Independence National Historical Park, plus many famous streets, scenes and buildings, make a fitting setting for the Hall, the Liberty Bell, the documents and the memories for which "the cradle of American democracy" has won world renown.

The historic collection alone is valued at a minimum of $1 million and some of the items are beyond price. ⊙

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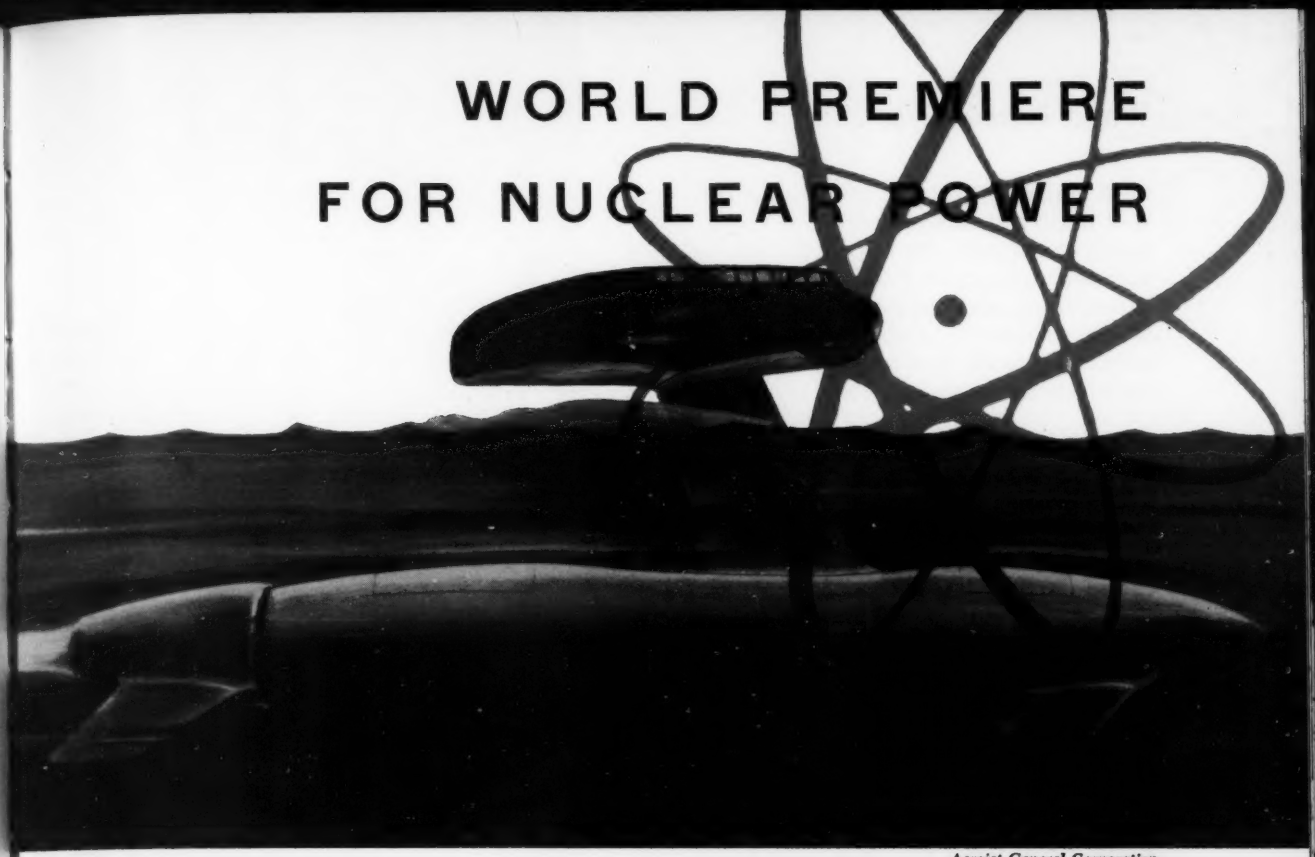
WORLD PREMIERE FOR NUCLEAR POWER



Aerojet-General Corporation

Cargos protected by marine insurance of future may go underwater to follow global nuclear path pioneered on surface by NS Savannah. Under government contract, this design is being studied by Aerojet-General staff.

"FLAGSHIP" of a now-actual international nuclear industry, the nuclear ship NS Savannah, to be christened on July 21, will be the peace-promoting viking of our atomic age.

Urgent problems in protection edge into sharper focus as the world's first reactor-powered merchant ship prepares to ply her course abroad, following her christening by Mrs. Dwight D. Eisenhower.

Safety is not the central issue, as was made clear during recent hearings by members of the Joint Congressional Committee on Atomic Energy. Protective measures resulting in an outstanding record have made nuclear development desirable to many fuel-pressed nations. But a practical problem remains: though the possibility of a serious atomic accident is extremely faint, the damage that could conceivably be done is staggering—and might well cut across international borders.

What is needed, and what insurance, atomic and governmental groups are striving to work out, are world-wide ways and means of providing industry and the public with adequate financial protection against the nuclear hazard.

In the case of the Savannah, joint insurance-government action offers such protection, much as it does for American land-based reactors. Hull insurance in excess of $10 million will be provided by the American marine insurance industry, and the federal government provides up to $500 million of indemnity to the builders and operators for each nuclear "incident" involving third parties.

(Though needed, no other nation has yet passed legislation corresponding to the United States' Price-Anderson Act, which establishes government indemnification for the extensive liability of the atomic industry. However, five nations are working on it: the United Kingdom, West Germany, Switzerland, Italy and Japan.)

For America's future atomic ships, Roy Leiffien, counsel for the American Institute of Marine Underwriters, reports that marine insurance companies are working toward developing suffi-

cient limits for both hull and liability coverages. How much will be required has yet to be established by Congress. In the event a joint facility becomes necessary, the marine firms are already in conference with the stock and mutual casualty atomic insurance syndicates which currently provide up to $60 million in liability protection for American continental nuclear installations.

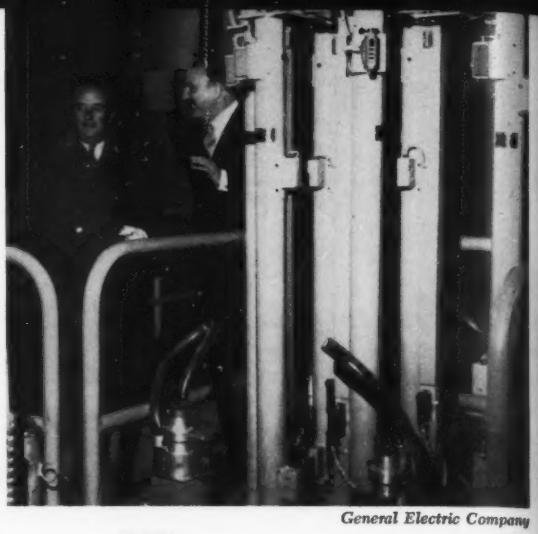
Overseas Reactors Pose Complex Problems

A look at the development of land-based reactors overseas points up further international liability complications. Suppose, for example, that an accident in an atomic plant operated in one country, but designed or equipped by a supplier in another nation, injured persons or damaged property of yet a third state. How is the financial responsibility to be apportioned with what could be a crushing loss to both the public and the firms involved?

The difficulty of the answer is compounded by the fact that it must sift through an almost impenetrable maze of legal and cultural differences. But it is being painfully and persistently searched out by a number of groups. Among them:

The Organization for European Economic Cooperation (OEEC) is the farthest along. A draft of a convention is under consideration by the ministers of member nations. Maximum liability provided, $15 million, which can be reduced at national option to $5 million, is too low. But it could serve as groundwork for future building.

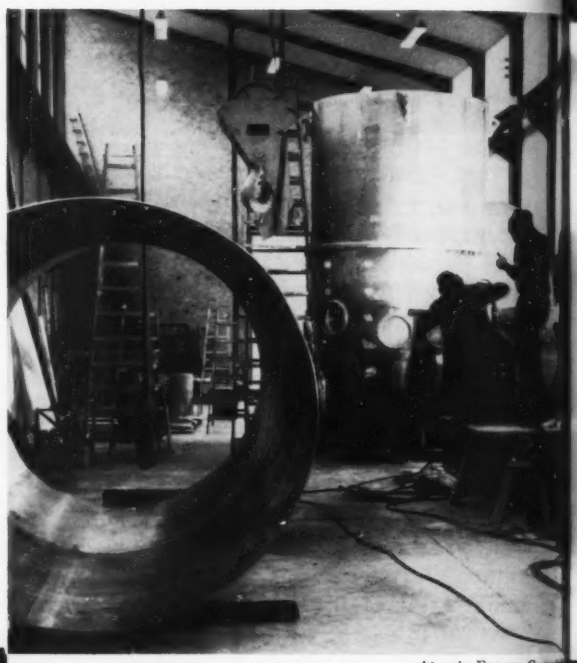
Perhaps of strongest interest to U.S. groups, the European Atomic Energy Community (Euratom) is working on a third-party liability convention to supplement the OEEC program. The Euratom plan is reported to provide for sub-



General Electric Company

SPAIN

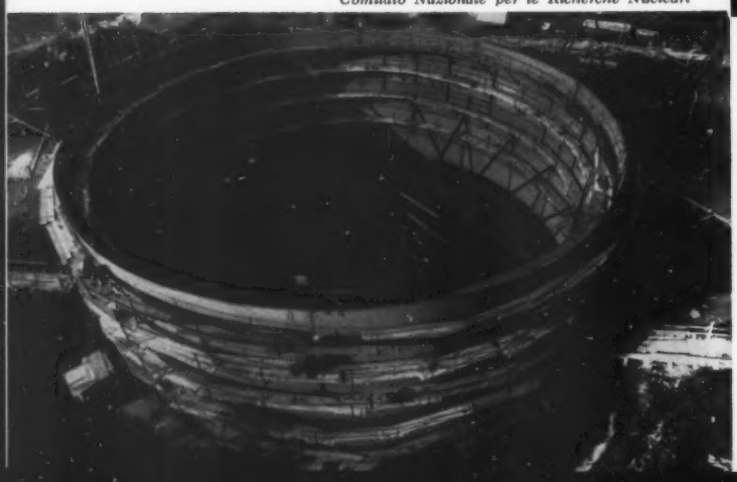
Atoms-for-peace means a new look in world trade. Dedication of Spain's first reactor, built by General Electric, was attended by Generalissimo Franco; meanwhile, GE had other reactors on the way for Venezuela, Taiwan, Italy, West Germany.



Atomic Energy Co

DENMARK

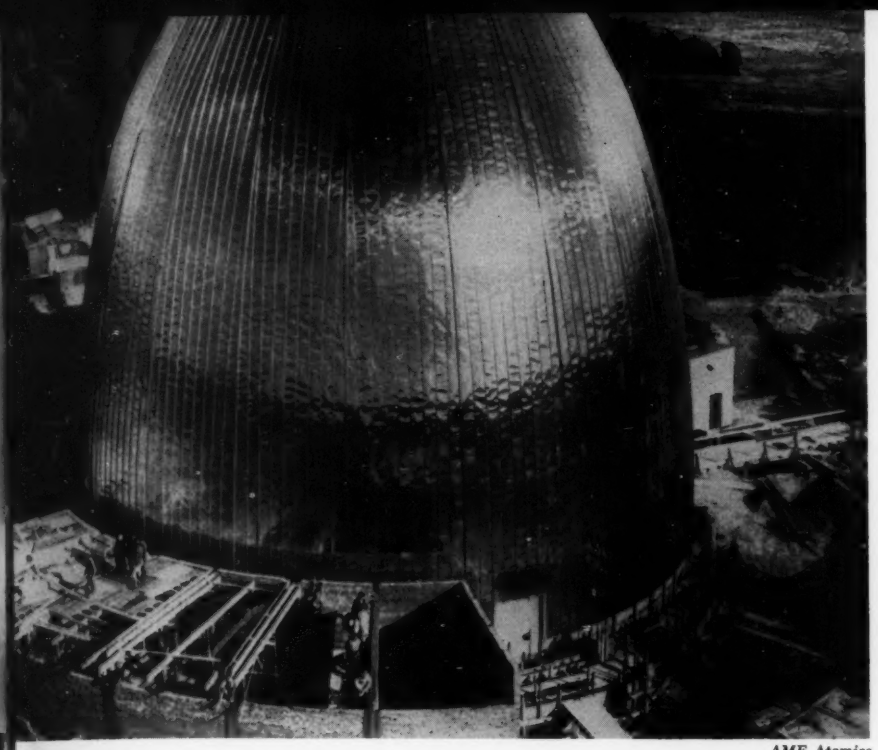
Danish workers, supervised by experts of Foster Wheeler Corporation, build research reactor to be fueled with uranium from the United States.



Comitato Nazionale per le Richerche Nucleari

ITALY

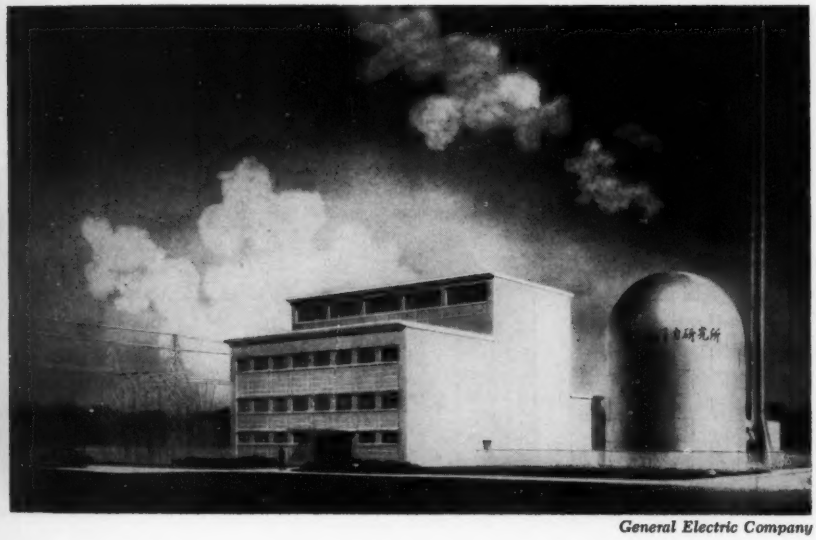
Italian reactor housing rises at Ispra, built by Comitato Nazionale per le Richerche Nucleari. Of 57 recent graduates of nuclear school run at the Argonne National Laboratory, 50 were foreigners.



AMF Atomics

GERMANY

Near Munich, Germany, stands the main tool of the University's new nuclear research center, a 100-foot tall, aluminum-sheathed reactor designed and built by American Machine and Foundry Company as part of atoms-for-peace.



General Electric Company

JAPAN

Japan will use GE-built reactor for both research and power production. Another nuclear reactor, to be made by General Dynamics Corporation, is being given to St. Paul's University, Tokyo, by U. S. Episcopal churchgoers.

The Babcock & Wilcox Company

BRAZIL

Brazil's University of Sao Paulo conducts radiation research with reactor built by a U. S. supplier, Babcock & Wilcox. Another lower-hemisphere reactor was recently completed in Belgian Congo.

stantially higher limits through a combination of private insurance and national indemnifications to protect nuclear operators and suppliers.

Ambitiously conceived, the six-nation Euratom program to develop nuclear power plants in cooperation with the U.S. has been the subject of considerable controversy in recent months. Still given a good chance to succeed, it means much to American firms as a market for atomic equipment. The solution of the operators' and suppliers' liability problem has been called "essential to the success of the joint program."

International Agreements Under Study

The International Atomic Energy Agency—operating under the aegis of the United Nations and originated in an historic UN speech by President Eisenhower in 1953—is also searching for solutions to the liability dilemma. Through its special 10-expert panel which includes the U.S Atomic Energy Commission's Edward Diamond, the agency recently initiated a series of discussions on a draft international convention prepared by the organization's secretariat.

Additional light has been shed on international nuclear liability by a special American study made under the auspices of the Harvard Law School and the Atomic Industrial Forum, Inc. Recently released, it probes the problems in depth and offers long range and interim solutions. Pinpointed as the ideal answer—though recognized as years of effort away—is a worldwide agreement including all nuclear nations and all ramifications of the liability problem. The study was supported by the Forum with the assistance of a number of its members, and through contributions by the American Insurance Association and the American Mutual Insurance Alliance, publisher of the Journal. ⊙

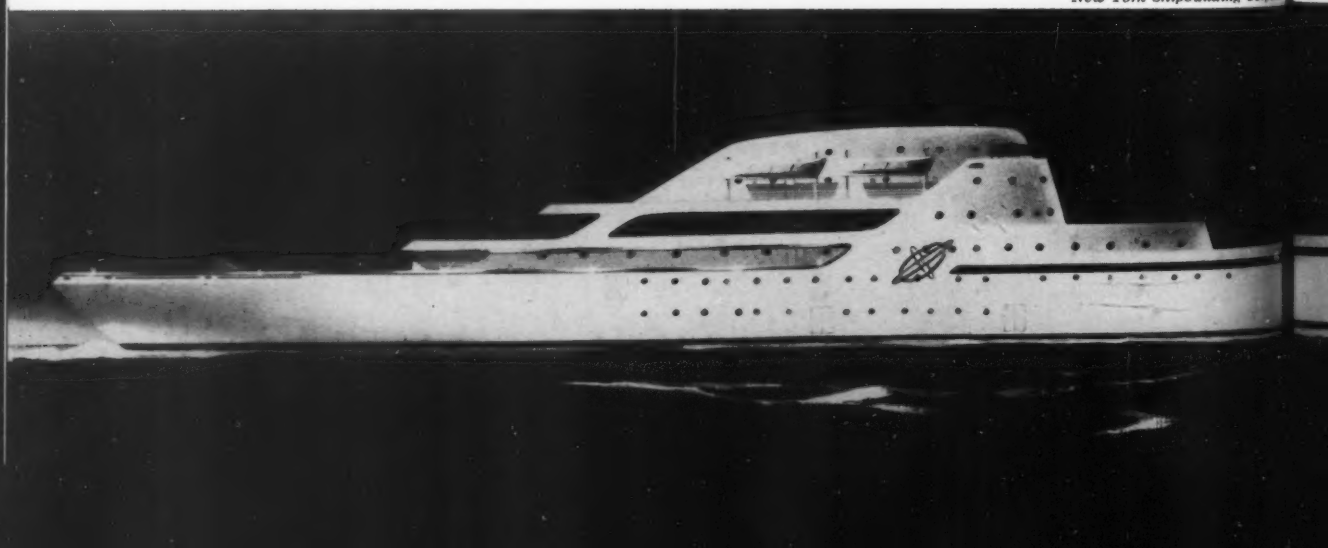
British Information Services

BRITAIN

British fast breeder reactor at Dounreay, Scotland, will manufacture more atomic fuel than it consumes, similar in principle to Enrico Fermi plant in U. S. Britain estimates nuclear power will be as cheap as conventional types by 1961.

Aerojet-General Corpo

New York Shipbuilding Corpo



Westinghouse Electric Corporation

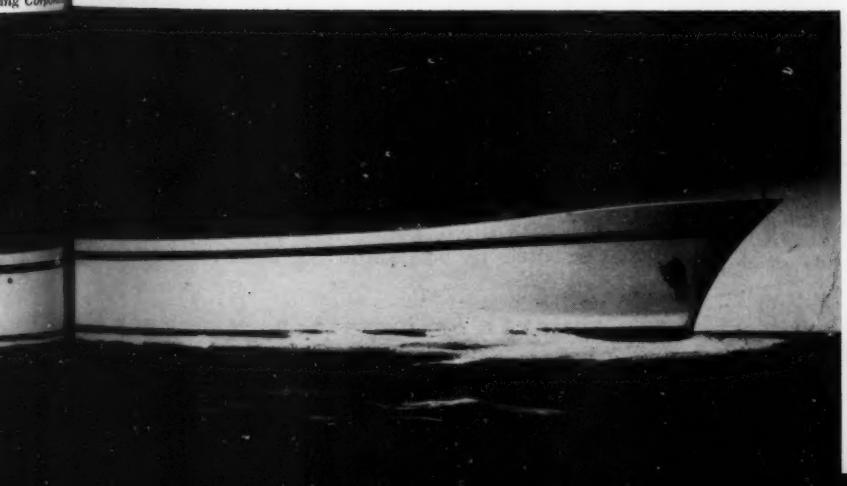
BELGIUM

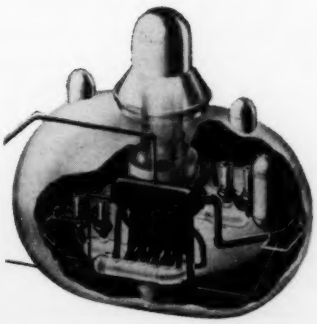
Belgium's first atomic power plant features special Westinghouse motor-pumps with unique sets of cooling coils. Pumps were first to be exported by an American firm. The reactor is scheduled to start up late in 1959 at Mol, near Brussels.

UNITED STATES

California trial ground for future links between the atom-powered trade nations of the world: an underwater high speed testing facility. Here light is shed on vessel designs that may mean commercial fleets powered by peaceful atomic energy.

Launching of America's NS Savannah, flagship of the international atomic age, points up complex insurance problems and progress made toward their solution. To be in operation in 1960, she'll narrow oceans as they've never been before.





Elaborate primary and secondary shielding surrounds Savannah's nuclear power plant; safety lies in steel, lead, concrete layers.

YES

Insurance Is Still Competitive

Contrawise impression may be created by current investigations.

By WALTER E. OTTO

OF COMPETITION, a famous American manufacturer and philanthropist once said, ". . . it is here; we cannot evade it; no substitutes for it have been found. . ."

Yet an impression is abroad that this time-honored axiom has been upset and that something has been substituted for competition in the property-casualty insurance business. The impression, or the implication, grows out of the inquiry by the anti-trust and monopoly subcommittee of the U.S. Senate's Judiciary Committee, under direction of Senator Joseph C. O'Mahoney, of Wyoming, into whether rating bureaus can justify all their functions.

Freedom of competition is only one issue in these investigations. The long-established system of state regulation of insurance under the McCarran Act also is on trial.

If something has come along to replace competition in the property-casualty insurance field, the many companies in the business haven't met up with it.

The old competition is as virile as ever, with some new toughness added. Once we thought we had all the competition possible when the battle line was drawn between the mutual and stock companies. Now competition has developed between: direct-writing, agency, and captive agent companies, if anyone can define these terms; between "independents" and "bureau companies"; between multiple-line fire companies and multiple-line casualty companies; between multiple-line property-casualty companies and life-accident-health companies.

Few executives are disturbed about ability to compete with other insurance companies.

The reason is that insurance companies must be economically self-sufficient. All must accept the principle of the pooling of risks to permit the law of large numbers to operate. All must accept the principle that the contribution of each class of risk to the pool must measure exposure to loss. The function of an insurance company is to spread the risk of certain types of economic loss so skillfully over a large body of policyholders that the contributions of the group meet both the losses of the group's members and the expenses of conducting the pool.

An insurance company that does not at least break even over a reasonable period of time, upon each of the important lines of coverage it writes, is not conducting a true insurance operation. It is operating a mechanism for subsidizing some of its members at the expense of other members. This is the very thing for which insurance men have been criticizing government invasions into fields competitive with insurance companies.

Competition by Government Long Prevalent

Insurance cannot well object to certain types of competition. One type with which it has had to live for a long time is self-insurance by large risks in the property-casualty field. Another is the simple refusal by many individuals to buy insurance. They prefer to take a chance, and spend their money for something other than insurance coverage.

Insurance also has had to live for a long time with direct competition by government, notably the competition of state funds for workmen's compensation. Insurance has had to stand aside and see government provide coverages it was unwilling or unable to provide—as with the excess on nuclear reactor liability, and the coverage made available by the Federal Crop Insurance Corporation. These situations have had to be accepted as borderline competitive threats

(An adaptation from an address by Walter E. Otto, chairman of the board of directors, Michigan Mutual Liability Company, Detroit, and immediate past president of the American Mutual Insurance Alliance, before the 1959 annual meeting of the Alliance.)

that had to be accommodated in the interest of operational realities. They had little effect upon the operations of the insurance companies themselves.

Insurance men complained that operating expenses of monopolistic state funds were subsidized by general tax revenues; that payments into the Social Security system had little relation to benefits; and that thus such institutions represented unfair competition with companies that had to operate within the economic principles governing insurance.

Now the insurance business is being subjected to a much more subtle and dangerous type of government competition. This competition is based upon the power of regulatory authorities to refuse approval of rates, even though it is shown such rates are necessary to provide insurance coverage. At present, most difficulty is developing in the automobile liability field where there is suspicion that needed rate revisions are being denied for political rather than actuarial reasons. Tomorrow it may be fire insurance rates that are subjected to this sort of treatment; the day after that it may be workmen's compensation rates.

Government Subsidizes Some, Taxes Others

So-called government insurance schemes traditionally have operated upon a basis of subsidizing one group and making up deficits by taxation of other groups. This has been a principal complaint of insurance spokesmen against such schemes. It is ironic that insurance companies should be forced to operate in the same way when adequate rates are refused them. Yet this seems to be precisely what many companies are getting into in writing automobile liability coverage in certain areas.

Suppose the state of New York had set up, a few years ago, a state fund which was given a monopoly of writing automobile liability insurance. Suppose that, for political or other reasons, it had been required to use the same rates that the insurance companies have been forced to use during the period when rate increases were refused by the state regulatory authorities. Presumably this hypothetical state fund would have incurred about the same deficit which the companies incurred during the period. Such a fund would have needed an appropriation from the state's general revenues to make good its deficit. Insurance companies have had to make up the deficit out of moneys contributed by policyholders of other states and holding other types of policies.

Making up such a deficit out of the state's general funds probably would have generated loud complaints from at least those persons who do not own automobiles, and certainly from the insurance companies that had been put out of business by a subsidized competitive operation. But under present conditions in the traffic accident field, why should any state set up a fund to handle automobile liability? It is simpler to apply the classic government method of handling such matters upon a "taxation and subsidy" basis rather than upon an "insurance" basis by transferring the tax burden to insurance companies through refusing to approve adequate rates. In this way, it is only the insurance companies—and not the public—that have cause for complaint.

Subtle Type of Competition Most Harmful

This roundabout method of trying to handle an "insurance" problem by a "taxation and subsidy" method, and forcing the companies to finance the operation, is a subtle type of competition with the insurance idea which seems far more dangerous to me for the future than all of the competition which one type of company can devise for use against another type.

We are, of course, going to be competing, in the years ahead, against other companies and types of companies. We also are going to be competing against the idea that insurance is not necessarily the best way of neutralizing economic risk. We are going to be competing against the philosophy of those who think insurance is an unnecessary evil. And we are going to be competing against the substitution of a government system for private insurance.

Most assuredly, there will be competition aplenty in the insurance business of the future. Fair, unsubsidized competition is no deterrent; otherwise, the insurance business in this country would never have reached its venerable age of 207 years. With competition, insurance has been in successful operation since 1752—when Benjamin Franklin and his associates founded the Philadelphia Contributionship, the oldest business corporation of any type in this country.

Insurance thus provides one of the classical proofs of the maxim: "A fairly decent man does not need a state or national law to keep him straight; his competitors and patrons usually tend to that." ⊙

"Tougher than a modern turnpike" is this 4.7-mile oval where performance and endurance are tested under simulated thruway conditions now changing our driving habits and car designing.

Hill-cresting with all four wheels off road is not a stunt. It tests whether car can take severe bounce maneuvers without loss of control or failure of steering, braking or suspension.

Chrysler Corporation, Dodge

"Dunking" test is insurance against engine drownout, wet-brake failures, impaired visibility and other hazards in storm-driving. Once, even windshield wipers were unknown.

Auto manufacturers would be the last to advocate such highway speeds. But in this test, cars are over-extended to insure ample margins of safety and performance.

"Safest place in the world to drive."

MOTOR-AGE MARVEL

THIS IS IT: "The safest place in the world to drive."

It is a composite close-up of the proving grounds of our major automobile manufacturers.

One of those manufacturers asserts: "If the motoring public could duplicate the safety record on the proving grounds, hundreds of lives would be saved each year, thousands of cars would be free of accident scars, and insurance rates could be cut by millions."

Drivers Demonstrate Good Rules for Safety

Instead, last year we chalked up 37,000 motor vehicle deaths and 1,350,000 disabling injuries on our street and highways.

What makes the difference between "the safest place in the world to drive" and our accident-strewn highways?

On the proving ground:

Everyone obeys the traffic rules without exception.

The thoughtless driver, the selfish driver, the grandstand show-off don't exist.

There isn't a heavy-footed hot-rodder or a reckless stunt driver in the lot.

The drivers are calm, level-headed operators concentrating on their job of driving and on the dials of their instruments.

In one company alone, a group of 12 veteran test drivers has amassed a grand total of 15 million miles, the equivalent of 5,000 coast-to-coast runs. Each of them has 20 years or more of service with the company, and each of them has at least a million miles to his credit. Several are well on their way to their second million. The average man would require two lifetimes of normal driving to roll up a million miles on the highway—if he were fortunate enough to survive the hazards.

Safety Is a Watchword on Grounds, in Labs

Everything about the drivers, the cars, the proving grounds and the laboratories behind the proving grounds belies the belief that "safety is a dirty word" in some Detroit circles. Be-

Motor-Age Marvel

fore the cars ever get to the proving grounds, they and their component parts are subjected to rigorous laboratory tests in which they are swung, shook, twisted, bent, bumped, tortured, drenched and otherwise put through every conceivable driving and weather condition.

Then, on the proving grounds, they are brake-tested, checked for car-passing safety margins, scored on their roadability, durability, J-turned, overturned, jerk-stopped, barrier-stopped and even tire-dynamited in "blowout" tests. In special tests for occupant safety, the cars are fitted with dummies.

Test-Run Idea Is 56 Years Old This Summer

These modern-day proving grounds and their laboratories have their prototype in a record-making test run which a Packard made from San Francisco to New York 56 years ago this summer. It was the first gas-driven car to make the journey under its own power, but the 2,500-mile trip, from May 23 to August 31, required 53 days.

Even that took some doing over the wagon roads of those days. Funds were sent to each town along the route, only sufficient to cover the necessities of the trip from town to town. To get "bed and board," the car and crew had to get there.

Today, at the proving ground of just one car manufacturer, hundreds of engineers, technicians and other automotive experts oftentimes drive a grand total of 50,000 miles in a single 24-hour period—20 times the mileage of the first 53-day cross-country trip.

Wanted: Patient, Understanding Drivers

In those early days, it was enough that a car could run at all, could be guided accurately and could be started and stopped at will. Even the indescribably bad roads of those days could be traversed, given a set of tools and a box of spare parts behind the "buggy seat," and a patient and understanding driver.

A revival of emphasis upon the driver is advocated by pioneering car manufacturers as they reflect upon the accident-death toll on our highways. Edgar L. Apperson, designer and builder of one of the early American automobiles, who died recently at 89 years, said, "If the problem (highway deaths and injuries)

Reputedly the oldest, largest and best equipped of the U. S. automotive testing grounds, this one has more than 62 miles of level and hilly roads of every type of surface. Some 40,000 test miles are driven here every work day; total since 1924 is more than 194 million miles.

How much "second-wind" stamina must a car have to keep out of trouble in present-day hill traffic, and will the brakes hold the car steady, even if they stop the vehicle "on a dime"? Tough tests on grades up to 28 per cent insure reliable performance and increased safety.

Three photos General Motors Corporation

Chrysler Corporation, Dodge

All-steel bodies are made safer by this roll test. Towed car, at 50 miles an hour, with wheels on one side passing over steep tipping ramp, is released automatically, allowed to roll. It is driverless.

Post-mortem, in an automotive engineering center, of a car which ran up 275,480 miles in 13 months. Laid out are all the thousands of car's parts, except for body shell, for examination by experts.

can't be solved by limiting the speed of cars, then it should be the responsibility of the courts to tighten the laws.

"A driver should lose his license for the first serious offense, and he should serve a maximum 25-year sentence for killing someone. Highway slaughter can be controlled."

Meanwhile, the modern-day proving grounds are demonstrating that the counterpart of "the patient and understanding driver" of old is probably the No. 1 essential for "the safest place in the world to drive." ⊙

Rus Arnold

FASTEST THING ON FIRES —AUTOMATIC SPRINKLERS

They've made a near-perfect record in quick knockout of fires.

By T. Seddon Duke
Chairman, Board of Directors
National Fire Protection Association

A SMALL DEVICE about the size of an ink bottle today is protecting some $100 billion worth of property in the U. S. from danger of destruction by fire. Without this miniature mechanical fireman, the National Fire Protection Association estimates, fire losses on that property might be 90 per cent greater than they are.

It's the automatic fire sprinkler, which in more than 80 years of fire fighting, under just about every conceivable condition, has amassed an almost perfect performance record of 96.2 per cent. That's a batting average of .962, phenomenal in any league.

Constant maintenance, nationwide inspections of the kind already offered by many insurance firms as part of their protective service, and wider use of supervisory services could bring automatic sprinklers closer to 100 per cent efficiency. For it is almost always the human element—poor judgment or carelessness —that is to blame in that 3.8 per cent of sprinkler failures.

For example, when a watchman *thought* a fire was out, and turned *off* the sprinkler system in a Fall River, Massachusetts, plant in October, 1941, more than 25 per cent of the nation's entire rubber reserve, so vitally needed for the coming World War II, was destroyed.

Shutting off the sprinkler system for the winter as an "economy" move resulted in a $1 million property loss at an Elmira, New York, warehouse in December, 1957. The "saving" was penny-wise compared with the total destruction of the four-story building.

And, because of failure to replace obsolete "left-handed" valves, a sprinkler system was actually turned off instead of on by an employee at a New Jersey rubber company. The result: $14 million property loss in a 1957 fire.

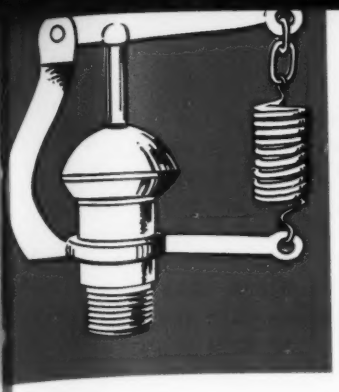
Proper maintenance and inspection could have prevented this loss and others like it. For sprinkler heads themselves are so near perfect that only one in 3,325,000 each year opens because of mechanical defect, according to Factory Mutual Insurance Companies.

Briefly, a sprinkler system involves an assembly of piping, control devices and distribution heads, all connected to a water supply. A sprinkler head opens automatically whenever the heat becomes intense enough to melt the little dab of lead, cadmium, tin and bismuth. The precise temperature at which this alloy will melt can be set by varying the ratio of the four elements; common melting points are 165, 212, 286 and 360 degrees Fahrenheit.

30 Years Idle, But Sprinkler Saves School

Water is released in sufficient quantity to put out the fire or control it until firemen arrive, and is confined to just those areas where there is fire. As soon as the water begins to move in the pipes, an alarm system is activated, notifying persons in the building or at a central protective service agency.

Months, even years, may pass without a sprinkler head being called on to function, but the system is always ready. The one in a Kenil-



Parmelee sprinkler head, patented in 1874, was first one widely used in U.S. industry. Water literally "sprinkled" from round, perforated head.

worth, Illinois, public school, for example, had never been used in the 30 years since it was installed. But it was inspected regularly, and when fire broke out December 16, 1958—just 15 days after the tragic blaze that killed 94 children and teachers in unsprinklered Our Lady of the Angels School in Chicago—Kenilworth's sprinkler system prevented a repetition. Two heads put out the fire and an alarm was sounded. There was no smoke in the halls, no panic. The property loss: $10.

Big fires usually result from lack of early detection and control. One advantage of automatic sprinklers is that they go into action during the shut-down, unoccupied time periods and before a fire has a chance to gain headway. Another is that where fire fighters otherwise would be forced out of an area by heat, sprinklers will absorb most of the heat while continuing to hold a blaze in check. Thus they facilitate fire department operations.

In 37.5 per cent of all fires, a single sprinkler head has been sufficient to extinguish the blaze, by catching it at the very start. It takes only three to five minutes for an average fire to create a ceiling temperature of 1,000° F. Thus the 165° sprinkler head operates within a minute, well before the ignition temperature of wood (465° F.) is reached.

History of sprinklers goes back to 1723, when the first patent was issued in England. In the original device, a system of fuses ignited gunpowder, which scattered a cask of "fire extinguishing liquid." An 1806 device used water in a system of pipes, operated by a weight released by the burning of cords. The first sprinkler installation in Europe was at the Edinburgh Rubber Works in 1881.

While the first automatic sprinkler head was designed in England in 1864, the first one used to any great extent was invented in America; and most of the early development took place in this country. The first U. S. patent was issued to Philip W. Pratt, of Abington, Massachusetts, in 1872. In his sprinkler, the melting of a fuse released a cord, which in turn released a spring-controlled valve, admitting water to a revolving device similar to a ceiling fan; this spread water over the fire. This system was so impractical it was seldom used, however.

To Henry S. Parmelee of New Haven, Connecticut, goes the credit for inventing the first automatic sprinkler head to be used extensively. It's said he objected to the high insurance rates charged for his piano factory after the big Chicago and Boston fires, and was determined to find some form of protection that would warrant a reduction. In 1874 he patented his round, perforated sprinker head, fitted with a valve and held in place by a piece of metal that would melt at about 155° F.

Pioneers Proved Value of Sprinkler Systems

Frederick Grinnell, of Providence, probably did more than any other one man to develop the idea of sprinkler protection. His Providence Steam and Gas Pipe Company was one of the first to install perforated pipes and sprinklers, setting the generally accepted standard for many years. In 1882 Grinnell added to the Parmelee sprinkler a splash-plate or deflector; the water stream was released against it to scatter in all directions. This was one of a large number of sprinkler devices developed in that era.

Another man instrumental in popularizing the automatic sprinkler was Edward Atkinson, president of Boston Manufacturers Mutual Fire Insurance Company, dominant figure in the Factory Mutual Insurance System of his time, and a pioneer in the field of loss prevention, a keystone of mutual insurance. His exhaustive testing and evaluating of sprinkler systems produced dramatic evidence of their value. His study of 965 mill fires showed 759 occurred in unsprinklered plants and resulted in an average insurance loss of $17,610. The other 206, in

Grinnell sprinkler, dating from 1882, directed water against a flat, sawtoothed splash-plate. It deflected drops downward forcefully.

sprinklered mills, caused an average insurance loss of just $1,080. Armed with such figures, Atkinson spearheaded a public campaign to reduce industry's fire losses.

The NFPA estimate that those losses are now just 10 per cent of what they would be without automatic sprinklers is one proof of Atkinson's success. Insurance savings for modern sprinklered industrial plants range between 60 and 90 per cent in reduced premiums, often as much as the cost of the whole sprinkler system. Hence, over its possible 50-year lifetime, this unbeatable protection, in effect, costs nothing.

Yet many buildings are still without sprinklers. In 1957 more than 257,000 industrial, commercial and mercantile fires were recorded in the U. S. The top 422 alone caused nearly $350 million in property losses and 312 deaths. A large number of businesses and industries which sustain severe fire losses, and are uninsured or underinsured, never reopen their doors; some have put the figure as high as 43 per cent. Still more firms fail within two or three years after a bad fire because of lost goods, customers, employees, capital assets and credit ratings.

Yet a businessman could preserve the continuity of his business, the productivity and purchasing power of his employees, his own life and perhaps many others by the use of a sprinkler system. Some 15 recognized manufacturers make them; all are rigidly tested and certified by Underwriters' or Factory Mutual Laboratories. Installation practices are guided by the "bible" of the sprinkler industry, Standard No. 13 of the NFPA's technical committee.

Sprinklers suiting a wide variety of needs are available. For example, in heated buildings, where there is no danger of water freezing in the piping, the wet pipe system, with water maintained under pressure at all times in the pipes, may be used. Activation of the sprinkler results in immediate discharge of water.

Where there is a possibility of freezing, a dry-pipe system can be used, with air under pressure in the piping instead of water. Here, opening of a sprinkler head releases the air pressure, activating a valve which then admits water to the system. Only the valve and a small amount of piping need to be kept heated.

A third type of system is the "pre-action" system, valuable where water-damage potential is high. It is a dry-pipe system with separate heat detectors which communicate temperature changes to an alarm control before admitting water to the piping. This allows the plant fire department to attempt to control the fire first by manual means. Only if the heat persists does the sprinkler system go into operation.

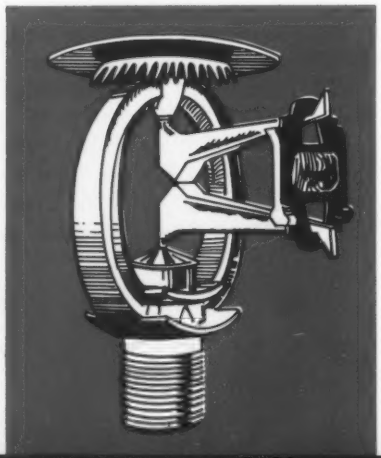
Other types of sprinklers are designed for hazardous operations where speed of action and total drenching of an area are needed. Some systems employ carbon dioxide, foam, inert gases or dry chemicals instead of water, for the protection of highly flammable liquids, plastics or other materials. All systems include means of operating either a water-motor gong or electric alarm, or both.

New-Type Head 35 Per Cent More Effective

Switching from ceiling-wetting, large-drop sprinklers to the downward-directed, fine-spray type in 1951 marked a significant advance in the engineering of sprinkler systems. The new type head is about 35 per cent more effective than the old and does less damage to both contents and structure when fire-fighting.

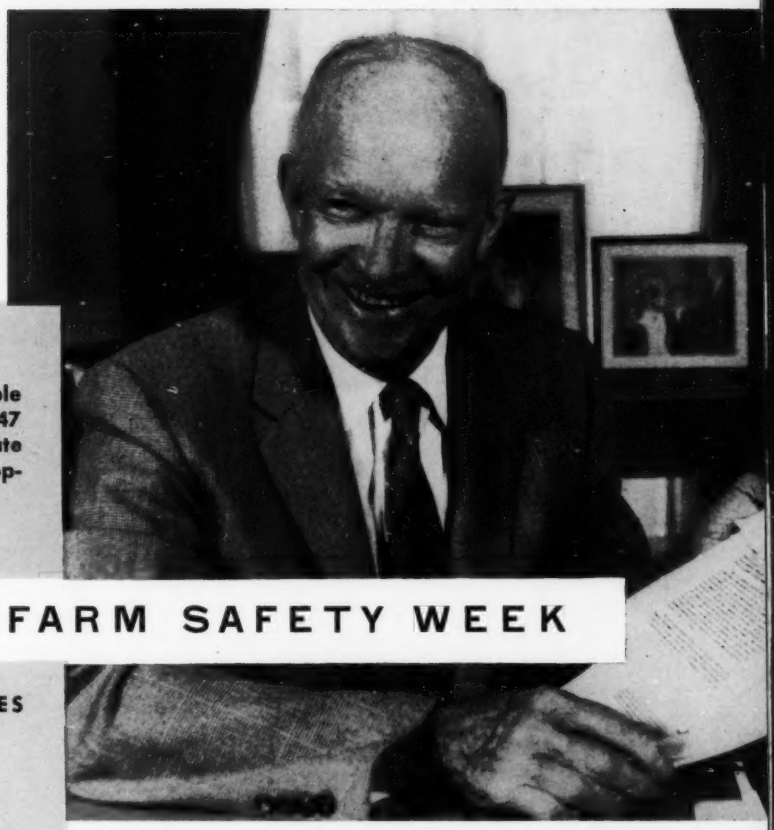
In nine out of ten cases, by the time the fire department arrives in response to the system's alarm, the sprinklers have already extinguished the fire. It is then just a matter of shutting off the water flow, installing a new sprinkler head, turning the water on again and resetting the alarm device.

Fire prevention, of course, is the main key to real fire safety, and should be the first interest of everyone. However, human carelessness being what it is, there will always be some fires. And in the absence of prevention, the best protection is the automatic sprinkler, first line of defense against fire. ⊙



Modern sprinkler, developed in 1951, sprays water downward in fine droplets, is 35 per cent more effective than older types.

"SAFETY MAKES SENSE"



Accidental deaths among farm people have been reduced from 19,500 in 1947 to 12,000 in 1957; accident death rate is down from 66 per 100,000 farm population in 1947 to 57 in 1957.

NATIONAL FARM SAFETY WEEK

STILL TOO MANY FATALITIES

The Worst Causes:

1	Machinery	34.11%
2	Drowning	15.04%
3	Firearms	11.99%
4	Falls	9.10%
5	Blows	5.74%
6	Burns	5.15%
7	Animals	4.90%
8	Electrical Current	3.41%
9	Lightning	2.53%
10	Poisoning	1.64%
11	Suffocation	1.39%
12	Other	5.00%
		100. %

The Worst Months:

May	9.92%
June	11.28%
July	12.27%
August	10.72%

From the President's Proclamation:

"I . . . do hereby call upon the people of the Nation to observe the week beginning July 19, 1959, as National Farm Safety Week, and I urge farm families and persons allied with agriculture to join their efforts in a continuing campaign to prevent accidents. I also request all persons and organizations concerned for the welfare of farm people to support and participate in National Farm Safety Week."

DWIGHT D. EISENHOWER

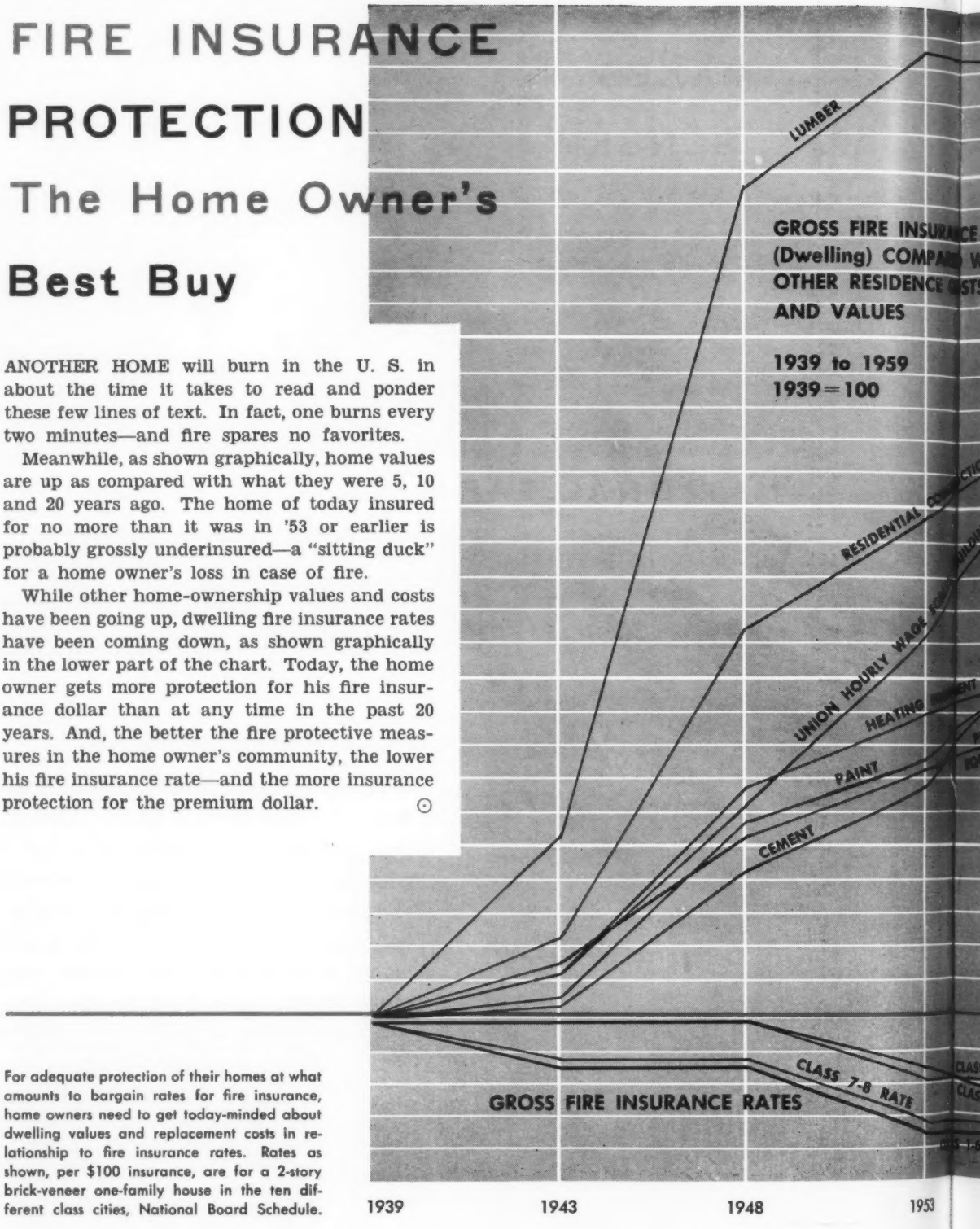
FIRE INSURANCE PROTECTION

The Home Owner's Best Buy

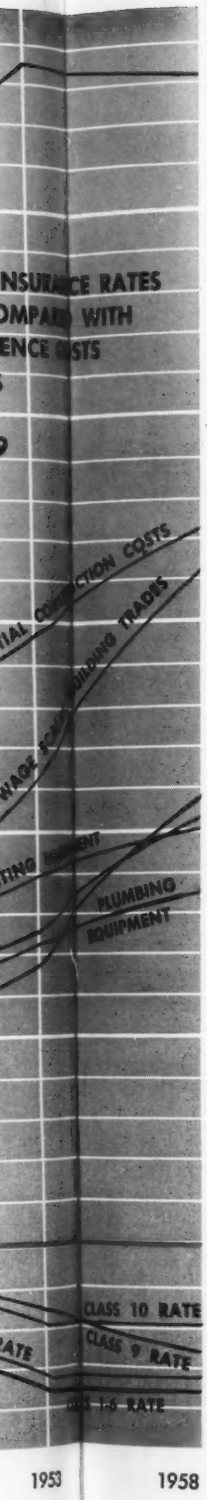
ANOTHER HOME will burn in the U. S. in about the time it takes to read and ponder these few lines of text. In fact, one burns every two minutes—and fire spares no favorites.

Meanwhile, as shown graphically, home values are up as compared with what they were 5, 10 and 20 years ago. The home of today insured for no more than it was in '53 or earlier is probably grossly underinsured—a "sitting duck" for a home owner's loss in case of fire.

While other home-ownership values and costs have been going up, dwelling fire insurance rates have been coming down, as shown graphically in the lower part of the chart. Today, the home owner gets more protection for his fire insurance dollar than at any time in the past 20 years. And, the better the fire protective measures in the home owner's community, the lower his fire insurance rate—and the more insurance protection for the premium dollar. ⊙



For adequate protection of their homes at what amounts to bargain rates for fire insurance, home owners need to get today-minded about dwelling values and replacement costs in relationship to fire insurance rates. Rates as shown, per $100 insurance, are for a 2-story brick-veneer one-family house in the ten different class cities, National Board Schedule.



400 390 380 370 360 350 340 330 320 310 300 290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50

NOW: LOWER RATES, MORE PROTECTION PER $

	1939	1958	% increase or decrease (—) 1939 to 1959
Class 1—4 cities			
Example: Chicago, Illinois			
Dwelling value	$10,000	$29,500	195%
Insured for	$ 8,000	$23,600 (80%)	195%
Rate per $100	23¢	15¢	—35%
Annual premium	$18.40	$35.40	92%
			"Bonus": $222 more insurance per premium $1, or 51% more.
Class 5—6			
Example: Des Plaines, Illinois			
Dwelling value	$10,000	$29,500	195%
Insured for	$ 8,000	$23,600 (80%)	195%
Rate per $100	23¢	15¢	—35%
Annual premium	$18.40	$35.40	92%
			"Bonus": $222 more insurance per premium $1, or 51% more.
Class 7—8			
Example: Tinley Park, Illinois			
Dwelling value	$10,000	$29,500	195%
Insured for	$ 8,000	$23,600 (80%)	195%
Rate per $100	28¢	19¢	—32%
Annual premium	$22.40	$44.84	100%
			"Bonus": $169 more insurance per premium $1, or 47% more.
Class 9			
Example: Alsip, Illinois			
Dwelling value	$10,000	$29,500	195%
Insured for	$ 8,000	$23,600 (80%)	195%
Rate per $100	38¢	28¢	—26%
Annual premium	$30.40	$66.08	117%
			"Bonus": $94 more insurance per premium $1, or 36% more.
Class 10			
Example: Crestwood, Illinois			
Dwelling value	$10,000	$29,500	195%
Insured for	$ 8,000	$23,600 (80%)	195%
Rate per $100	42¢	34¢	—19%
Annual premium	$33.60	$80.24	139%
			"Bonus": $56 more insurance per premium $1, or 24% more.

The BETTER the City's Fire Defens

The LOWER the Fire Insurance Rate

Excellent waterworks,

large paid fire departm

good laws.
Class 1-4 Rate

Good waterworks,

small paid and partly p
fire department,

fair laws.
Class 5-6 Rate

Small waterworks,

partly paid or volunte
fire department,

questionable laws.
Class 7-8 Rate

No waterworks,

volunteer fire departm
one piece of apparatu

no laws.
Class 9 Rate

Protection 100% lacking
Class 10 Rate

WITH NIXON IN THE

The opening of an epochal exhibition

AMERICA'S FIRST major exhibition ever held in the USSR is expected to be seen by 3½ million visitors from various parts of the Soviet Union.

Simultaneously, millions of Americans will be seeing the Russian scene through one official pair of eyes in the person of Vice President Nixon who is scheduled to open the exhibition, on July 25, for its six-week stand.

It is to be a "transplanted corner of America" in the heart of Moscow. If, as some estimators say, there is $3 billion worth of business waiting for the U.S. in the Soviet market in the next three years, the exhibition should serve as a persuasive advance agent. Officially, though, it is "not a trade fair," but a "projection of a realistic image of American education, science and research, and art."

The Russian image reflecting back to the U.S. is highlighted by Moscow itself. This, the capital of the Union of 15 Soviet Socialist Republics,

Russian people impress visitors as looking toward the future with a stolid faith difficult to fathom.

A gateway to the Kremlin, an ensemble of palaces, cathedrals, belfries and towers, including Great Kremlin Palace, the Supreme Soviet's rallying post.

Moscow's modern edifice for the USSR Council of Ministers contrasts with housing, living facilities. Housing investment is roughly half of U. S. total.

Four photos U. S. Embassy Union of SSR

. S. S. R.

For the exhibition-dome foundation, frozen ground was broken by the "klin-baba" system. Gold-colored dome, biggest ever, over clear-span area of 30,000 square feet, will be bought, with adjuncts, by the USSR.

Kaiser Aluminum and Chemical Corporation

celebrated its 800th anniversary in 1947. Here is headquartered the Communist international with the triple global threat defined by Allen W. Dulles, U.S. Director of Central Intelligence, as: "First, military; second, economic, and third, subversive. . . . They have determined—cost what it may—to develop a military establishment and a strong national economy which will provide a secure home base from which to deploy their destructive foreign activities."

In these economic gymnastics, the consuming public fares badly in comparison with the U.S. standard. In 1958, for example, the Soviets produced one automobile for every 50 we produced, but they were turning out four machine tools to our one. Soviet citizens in 1958 had available for purchase barely one-third the total goods and services available to Americans. Furthermore, when Khrushchev promises his people the world's highest standard of living by 1970, "this is patently nonsense . . . a standard tool of Communist propaganda," according to Director Dulles.

Living Space Is Scarce by U. S. Standards

The Soviet housing investment is roughly half that of the U.S., although living space per capita in the USSR is only one-fourth that in the U.S.

For transportation and communications, the Soviet expenditure is less than half the U.S. total. Our massive highway building program has been running 15 to 20 times the USSR spending, whereas their annual investment in railroad rolling stock and fixed assets substantially exceeds ours. As for road building, the Kremlin leaders are cold to having their people travel around on a massive scale; this would put on pressure to give the people more automobiles.

Commercial investment, which includes stores, shopping centers, drive-in movies and office buildings, has been absorbing only $2 billion a year in the USSR as compared with more than $6 billion in the U.S.

With their lower living standards and much lower production of consumer goods, the Soviets are, in effect, plowing back into the Communist fortress a large section of their production—30 per cent—while the U.S. is content with an input of 17 to 20 per cent.

Even insurance, Soviet style, has been prostituted to the cause of "save and invest until it hurts and then some more." "Gosstrakh," government owned and operated company, has a monopoly on Soviet-style insurance: voluntary life insurance; compulsory property insurance on all privately owned buildings, and on all other property of collective farms; voluntary insurance on all other personal property of those not on collective farms, and accident insurance, but no automobile insurance—in fact, almost no automobiles.

Private cars are said to be as scarce as one per 200 residents in Moscow and fewer than that elsewhere. Russia is now manufacturing a dribble of reasonably good mud-roads-type automobiles, judged to be about as numerous in relation to the population as cars were in America in 1908. Some plushy limousines are put out, too.

Absence of automobile insurance may be further explained by the availability of social security benefits and by the fact that the responsible driver is held personally liable from both the civil and criminal standpoints.

As for the compulsory property insurance on privately owned buildings, most housing is state-owned or operated, either by municipal governments or by factories, businesses or institutions. For the few Russians who own their own homes, the compulsory insurance also imposes tough regulations. A citizen who is home but fails to help firemen put out the blaze loses his right to claim compensation.

The voluntary life insurance is said to be sold persistently and aggressively, spurred by government advertising, apparently as another means of siphoning off private cash into the Kremlin coffers. In two years there has been a reported rise of some 66 per cent in the number of policyholders to a total of 10 million owning 60 billion rubles of life insurance.

Agents Far Better Paid Than Other Workers

"Gosstrakh" has an agency force of about 40,000 selling on a commission basis in cities and towns, with rural agents operating on salary. A full-time agent's income averages about 50 per cent more than that for all industrial and commercial workers. Most premiums are collected at the door monthly.

Fewer than 5,000 U. S. tourists get to Russia annually. A close-up can be had in New York, June 28 to August 10. The Russian exhibition will be the reciprocal of the one Vice President Nixon is opening in Moscow July 25. ⊙

"THE GLORIOUS FOURTH"

IF

Fireworks Don't Mar It

DURING THE REVOLUTIONARY WAR following America's first Independence Day, 183 years ago, 4,044 soldiers were killed, 6,004 disabled.

Since then, in celebrations held to commemorate that Fourth of July, more Americans have been killed by fireworks than by the guns in the War of Independence. More than 10 times as many have been crippled, injured or blinded as were hurt in that historic struggle —an estimated 125,000 since 1900 alone.

Efforts have been pushed to reduce this toll. Thirty states over the past 22 years have adopted laws based on the National Fire Protection Association model fireworks code, and striking results were noticed at once—a 99 per cent reduction in casualties in Indiana in its first year, for instance. Congress helped fight "bootlegging" with its 1954 ban on interstate transportation of fireworks into any state which forbids their sale or use. Fireworks manufacturers claim to be making their products ever safer.

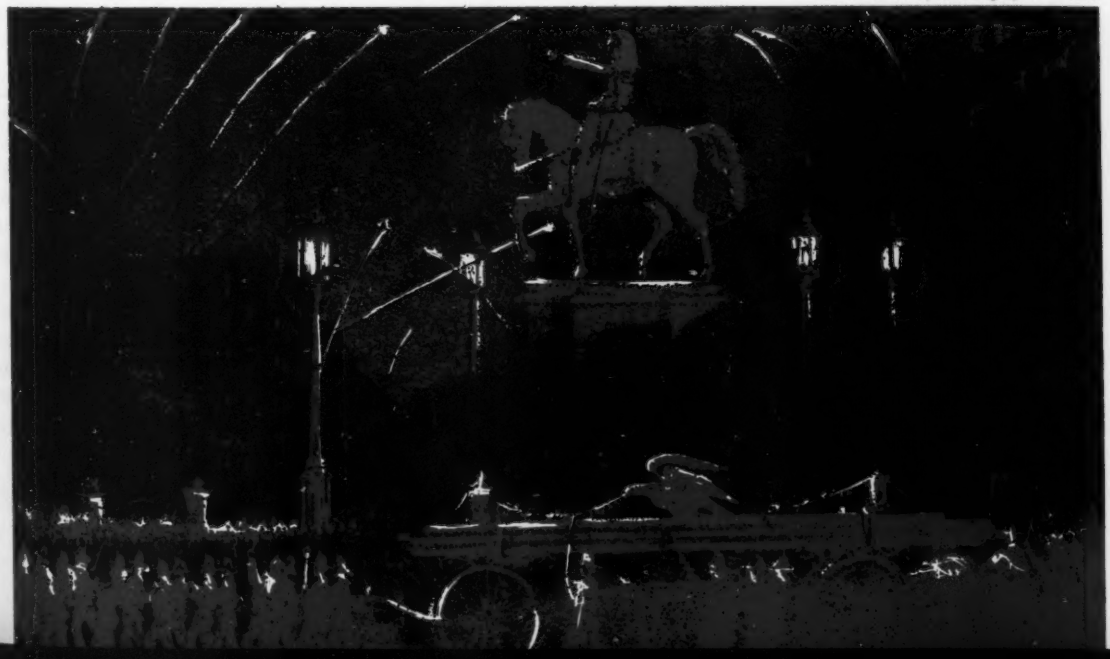
Yet even within the past 10 years, fireworks casualties have been estimated at 1,200 a year, most of them children. The figure declines as time goes by, but again this Fourth of July doctors will wait and wonder how many shattered fingers, painful burns and needlessly blinded eyes they will have to treat.

Some fireworks still get into nearly every state. Some states have no control laws at all (Louisiana, Mississippi, Missouri, Nevada, Oklahoma, Texas, Tennessee). Some limit types and sizes of fireworks (Arkansas, California, Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, South Carolina, Virginia, Washington, Wyoming), but as has been graphically and tragically demonstrated, a child may lose the sight of an eye from a tiny "ladyfinger" firecracker as well as from a "cherry bomb."

We've had a lot of experience with fireworks in 183 years. And as Benjamin Franklin said of experience: "Wise men learn by other's harms, fools scarcely by their own." ⊙

Firemen's parade and celebration of first Atlantic Cable laying, in 1858, almost turned to disaster when fireworks ignited roof of New York City Hall. Whole building was barely saved.

Museum of the City of New York



PEAK YEAR FOR POOLS

Swim craze accents insurance protection, safety precautions.

IF PRESENT TRENDS PERSIST, the family swimming pool may put the badminton set and the barbecue grill into back yard "mothballs" and, in the process, end up as ubiquitous as today's motorcar.

Right now, the swimming pool industry is rejoicing in its seventh straight year of burgeoning growth, stimulated by the nation's leisure time being committed to informal and active home-and-family pleasures. The National Swimming Pool Institute estimates that some 52 million American homes may be pool-equipped by 1982. That's nearly as many pools as there are passenger cars and more than the number of homes in the United States today.

Basic reasons behind the surge in home pool popularity are status motivations and a growing public antipathy for congested traffic, says Jerome Y. Rudolph, president of United States Pool Corporation, which promotes sales and safety with free swimming lessons for customers' families. With the stage set by the mass exodus to suburbia, development of comparatively low cost units and easy credit also have added impetus to the boom.

Its astonishing growth has made the swimming pool industry a $700 million business. In 1948, Americans owned 10,800 pools; 2,500 were home units. Some 62,000 installations in 1959 will boost the new total to near a quarter-million, about two-thirds of them residential. California's 70,000 pools lead the nation, with the Midwest and Northeast the fastest growing areas.

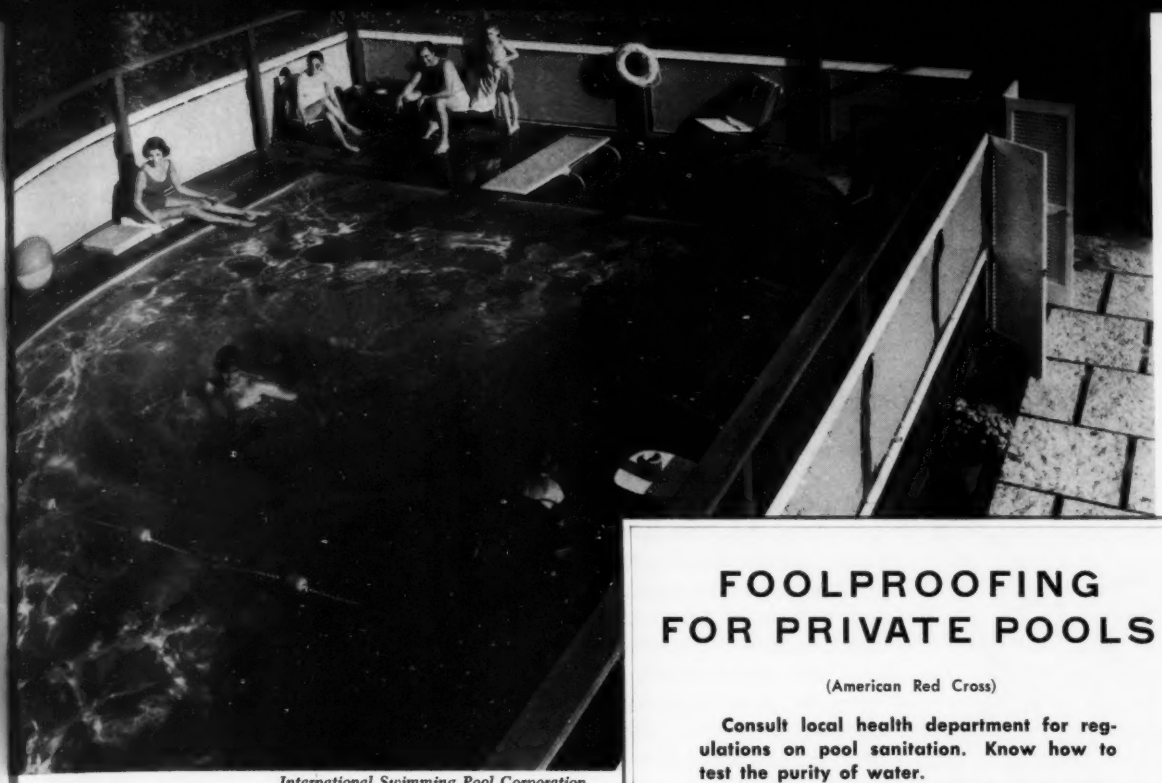
Obviously, the day of the "poor man's" pool is here. Available in literally all shapes and sizes, the average unit runs a little more than $4,000. Three-fourths of the models built range from 15 x 30 to 20 x 40 feet in size. There are 100 accessories on the market to doll up any model.

New owners of home pools find that moral and financial responsibilities are part of the package they've added to their back yards. Careful safety measures and insurance protection are musts. Significantly, from the very start American swimming pools have had common bonds with the insurance business. The first pool was built in 1827 in Boston, venerable insurance hub and home town of an early swimming enthusiast and mutual insurance founder, Ben Franklin. Franklin wrote of swimming in Boston's ponds as a boy, a century before the first pool came into being.

Today, from Boston across the nation, comprehensive personal liability coverages guard

A fibreglass pool enroute to a U. S. backyard. Industrial insurance needs zoom as builders grow ever more busy.

United States Pool Corporation



International Swimming Pool Corporation
While free-form pools with exotic trappings appeal to status seekers, safety-fenced Esther Williams job has wider market.

policyholders against potential accidents including pool mishaps, with no additional cost for swimming pool protection.

As for pool safety, with numerous measures set by law, engineered into pools by builders and recommended by insurance and safety groups, the owner of the private pool remains the key to the accident problem.

According to Robert S. Greene, executive secretary of the National Swimming Pool Institute, about one out of every five drownings occurs in a private pool. Basing his figures on a five-year study in Los Angeles county, Greene reports "the majority were small children and, more significantly, most of the drownings occurred in fenced or walled pool areas." Added note: two out of every three of the youngsters were not authorized to enter the pool area.

One industry spokesman has suggested that accidents will drop in the future as rising pool popularity induces more people to teach their children to swim and to learn themselves. With full awareness by the pool-happy public, this could be the case. If so, the safety record will be brighter than it has been so far with an earlier industrial runaway, the automobile. ⊙

FOOLPROOFING FOR PRIVATE POOLS

(American Red Cross)

Consult local health department for regulations on pool sanitation. Know how to test the purity of water.

Be sure deck is as slip-proof as possible. Rough cement or small tiles make safe surfaces.

Clearly define shallow and deep sections of pool—run buoy lines across to separate.

Allow no one to swim alone.

Provide supervision for youngsters at all times.

Be sure all pool users know how to swim. If there are a number of non-swimmers or poor swimmers in the neighborhood, consider swimming classes and safety demonstrations. Your local Red Cross chapter will help you.

If possible, fence pool and include gate which can be padlocked when pool is not in use.

Make some provision for shade so pool users can get respite from summer sun.

Keep some sort of rescue device handy at all times. A ring buoy or reaching pole would be advisable.

Keep a first aid kit on hand.

Be sure some member of family knows how to administer first aid, especially artificial respiration.

Allow no running or horseplay around pool.

Do not permit bottles or glassware in pool area.

To help keep pool clean and guard against infections, provide antiseptic footbath, some sort of shower arrangement if possible.

Remember that a diving board could be a hazard. Be sure water is deep enough for diving from board and that board is properly placed. Caution swimmers to stay away from area directly in front of board.

Check your insurance policies to determine whether or not you are covered for accidents in pool area.

THESE ARSON SLEUTHS MAKE ASHES "TALK"

Insurance investigators help the law curb crime and fraud.

Silver fox phony

A CHICAGO fur dealer who had the "misfortune" to lose his whole stock of expensive silver fox furs in a fire was more than a little put out when his insurance company held up his settlement. But the delay was nothing compared with the bombshell that hit him next. Scientific arson investigators, professionally suspicious of just about every fire, had proved with hairs and microscopes what the dealer finally had to admit: he'd removed his valuable furs, substituted cheap rabbit skins, then set fire to his store in the hope of collecting a big insurance payoff.

That he and innumerable others like him did not succeed is to the credit of modern police and fire department arson investigators and the equally skilled fire sleuths insurance companies have found it necessary to employ in their continuing effort to keep insurance costs down by preventing fraud and losses.

For although thousands of persons are still getting away with arson every year, and causing millions of dollars in property damage, the science of arson investigation has been perfected until there now are few, if any, arson motives or methods that arson sleuths aren't wise to. Arson is still one of the most difficult crimes to prove, because evidence may burn up with the building, or delayed-action devices ignite the fire while the arsonist is "innocently" home in bed or out of town. But increased interest and knowledge on the part of police, fire and insurance authorities are putting a growing number of firebugs behind bars.

There's Many a Motive for Arson Fires

The precise number is difficult to determine. The FBI does not include arson in its Uniform Crime Reports, much to the regret of arson investigators, and no other agency has complete nationwide statistics. A 23-state survey made by the Ohio Arson Bureau in 1957 gave a partial indication: in 5,120 incendiary fires reported, there were 1,590 arrests, and 1,027 convictions. As is the rate throughout the nation, about half of those fires were set by juveniles, in lumber yards, grain elevators, schools, churches and theaters. Many others were set by pathological firesetters (pyromaniacs). Such cases are disposed of by juvenile authorities and mental institutions, one reason for the big gap between the number of arson fires and jail terms for that crime. Other fires were set to cover up a crime —murder, burglary, or shortages in the books or inventories.

"Innocence" abed

Nearly 400 of the blazes included in the Ohio survey—and many others—are fraud fires, set by owners of stores, factories or homes, or by professional "torches" they'd hired, for the purpose of collecting insurance. Usually in such cases the business is losing money, or the dealer

is caught with obsolete stock or equipment, or he wants to get rid of his old building so he can move to a new one—financed with insurance money. Usually he overinsures his property, often adding large new policies to his coverage shortly before the fire despite efforts by most insurance companies to prevent such practices and to eliminate such "moral hazards" as poor risks.

Of 3,698 suspicious fires investigated by the National Board of Fire Underwriters' arson department in the past year, 578 were found to be insurance fraud fires. More than 50 per cent involved private dwellings. The aggregate insurance at risk in these cases was nearly $20 million. In 118 of the cases, 182 arrests were made, 100 involving insurance policyholders with total coverage of $2,900,000.

Slow sales, fast burn

The problem of arson obviously is a serious one for the nation's fire insurers, and it is getting worse. Statistics show that incendiary and suspicious building fires nearly tripled between 1950 and 1957, from 5,600 to 15,000. They rose from .9 per cent of total fires to nearly 2 per cent, and accounted for property losses that nearly doubled in that period, from $15 million to almost $27 million. Considering the vast sums insurers pay each year on legitimate fire insurance claims, they and their policyholders can ill afford to finance such crime and fraud.

Insurers Turn Sleuths in Self-Defense

Under the pressure of the increasing number of suspicious and fraudulent fires, insurers entered the arson investigating field some 35 to 40 years ago. Arson has always been around; the very first case ever tried in a U.S. court, in fact, was an arson case. But only in modern times has fire insurance been so widespread that it has become a motive for setting fires. And starting about 1920, whole rings of skilled professional arsonists began operating in the fertile insurance fraud field.

Detroit, in 1921, for example, spotlighted the insurance industry's problem. It had incendiary fire losses of more than $1 million, caused mainly by two racket rings. One worked a ramshackle, immigrant section of town, getting residents to take out insurance and then leave town while a "torch" burned their homes; everybody got a cut of the insurance money. The other was a gang of junk peddlers. As autos replaced horses and the junk and garbage business declined, they not only burned their highly insured stables, but often substituted cheap old horses for their good ones and set fire to them so they could collect for the animals, too.

Crooked horseplay

Arson Increases When Business Falls Off

When the depression hit, authorities and insurers faced an even greater problem. Arson shot up, as it always does during economic downturns. It accounted for 1 per cent of total fires in 1921, but 10 per cent by 1932. In 1937, as ruined businessmen and jobless homeowners desperately sought ways of raising money, one-third to one-half of all U.S. fire losses were attributed to moral hazard, defined as a mental attitude that makes one regard fire as not undesirable. From 1927 to 1937, fire losses amounted to $4 billion, fantastic in those days—and some 90 per cent of that was paid for by insurance companies.

In Chicago the combination of hard times, hoodlumism and enterprising arsonists added up to a record high fire loss of $19½ million in 1934. There were 70 fires a day, up to 90 per cent of them believed to be incendiary. One of the best known "torches" of the time was mountainous Bertha Warshovsky, commonly known as "Grandma." The only notably successful female arsonist in history, she was known for never using more than 5 gallons of gasoline to do her job (some less skilled colleagues used 20), and for never bungling a fire. She nonchalantly

Torch . . . singer?

These Arson Sleuths Make Ashes "Talk"

took a streetcar home after setting each blaze.

Grandma's last fire, meant to burn out a butcher shop, spread to apartments above it and a paralyzed 17-year-old boy was killed. When authorities finally succeeded in playing off one arsonist against another, Grandma was arrested. She turned state's evidence, and helped break up a notorious ring. Her information led to 60 arrests and 37 convictions.

With the cracking of the arson rings in Chicago, fires dropped to eight a day, and the 1935 fire loss to $8½ million. Insurance premiums for area residents were reduced a total of $1 million.

"Come on! Talk!"

Since insurance companies and organizations entered the field of arson investigation, one of the best known and most effective groups has proved to be the Mutual Investigation Bureau, organized in 1947 to give mutual insurance policyholders extra service by assisting local, state and federal investigators. Headed by Dr. Richard C. Steinmetz, a criminologist and one of the nation's leading arson experts, the bureau's staff of former FBI men and attorneys cooperates on a nationwide basis in the detection, investigation and identification essential to the successful solution and prosecution of arson cases. They and their counterparts around the country have done much to help tighten the net of the law around the nation's firebugs.

Increasingly well trained police and fire department arson investigators have been another factor in this. In more and more cities, all firemen are receiving basic training in arson detection; this is important because firemen's observations of suspicious elements when they arrive at the scene of a fire are responsible for probably 95 per cent of original detections. Then arson investigation specialists, trained at special schools and seminars, step in. With their scientific crime laboratories, they are able to tell even in some of the most "foolproof" cases whether the fire was set, and if so, where and with what material. From there it's often not too hard to track down the who, too.

Besides the increase in numbers and training of arson investigators, and the increasingly stringent standards of most fire insurance companies, another factor which gives hope for reducing the annual arson toll is the law. Originally arson was a capital offense; now most states provide penalties considered more realistic, since juries generally are reluctant to convict on such a charge if the death penalty is involved. Recognizing that arson often is habitual, some states make it a non-probation offense.

In 1956, after a campaign by the International Association of Arson Investigators, Congress included arson in the federal fugitive felon act; it has helped bring to justice offenders who once might have gone free simply by crossing a state line.

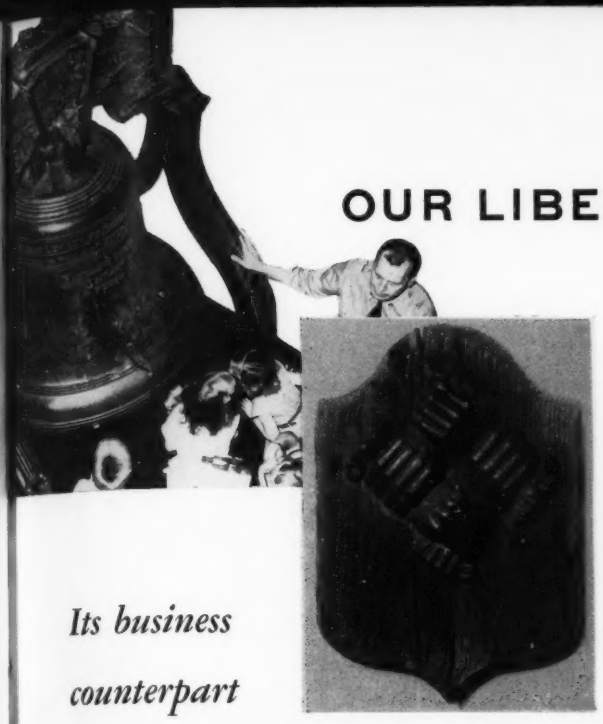
A number of states have passed laws holding parents liable for arson damage by juveniles. It is hoped these laws may cut the appalling juvenile arson rate, generally considered the worst problem in the U.S. arson field now.

Many more things still need to be done, though, before appreciable results can be achieved in reducing arson. Still better training in detection and investigation is needed at every level. Less overlap and more cooperation would help, too, in keeping separate police and fire department arson squads, state police and fire marshals' offices, and sometimes other agencies from duplicating effort on the same cases. In some places the fire department investigates arson but does not have the arrest powers it needs. Better exchange of information on the whereabouts and movements of known arsonists and pyromaniacs also is needed between cities and states, arson experts say.

Science, Sleuths Cramp Firebugs' Style

As progress is made along these lines, the arson "game" becomes ever tougher to play successfully. It's tough enough already, as many an arsonist is finding out to his sorrow. Now, with the help science is giving investigators, even ashes can be made to "talk." ⊙

OUR LIBERTY BELL



Its business counterpart

JUST AS the Liberty Bell is the incarnation of our independence and freedom, there is a time-honored hallmark of American business sagacity and farsightedness.

Both bell and hallmark had a common country of origin—England.

Both date from a common year—1752.

Both owe their fame to one man—John Stow.

Both are linked with three other famous Americans.

Both are inseparably linked with the history of mutual insurance in America.

Both bell and hallmark now have one proud home in common—Philadelphia.

This famous hallmark, companion-piece of the Liberty Bell, is the seal and firemark of The Philadelphia Contributionship for the Insurance of Houses from Loss by Fire, a mutual, and the oldest active insurance company in the U.S.

The Liberty Bell was cast in England in 1752 for the Pennsylvania statehouse. Prophetic of its destiny, it had been ordered by the Pennsylvania Provincial Assembly to be inscribed with the words: "Proclaim liberty throughout the land to all the inhabitants thereof." (Leviticus 25:10)

Likewise, the Contributionship firemark, also conceived in 1752, had its origin in England, being adapted from the Hand-in-Hand Insurance Company of England (1696), history's earliest mutual insurance company.

In the adaptation, the two clasped hands of the first English mutual were rejected in favor of the four-handed clasp of the Union Insurance Company of England (1714), with the clasp being converted into the "unbreakable" Lady-to-London grip.

John Stow was selected by officers of the newly formed company to cast the Contributionship Hand-in-Hand mark, of lead.

This same John Stow, a few months later, played a key role in the fame of the Liberty Bell when he was called upon to recast it. It either had been damaged in transit from England or else had cracked when first rung in Philadelphia; histories report both versions.

Subsequently, both bell and firemark were identified with three other famous Americans—Benjamin Franklin, John Morton and Robert Morris. All three were among the nearly 1,800 earlier members of the Contributionship, Franklin himself standing "at the head of the directors chosen at the first election."

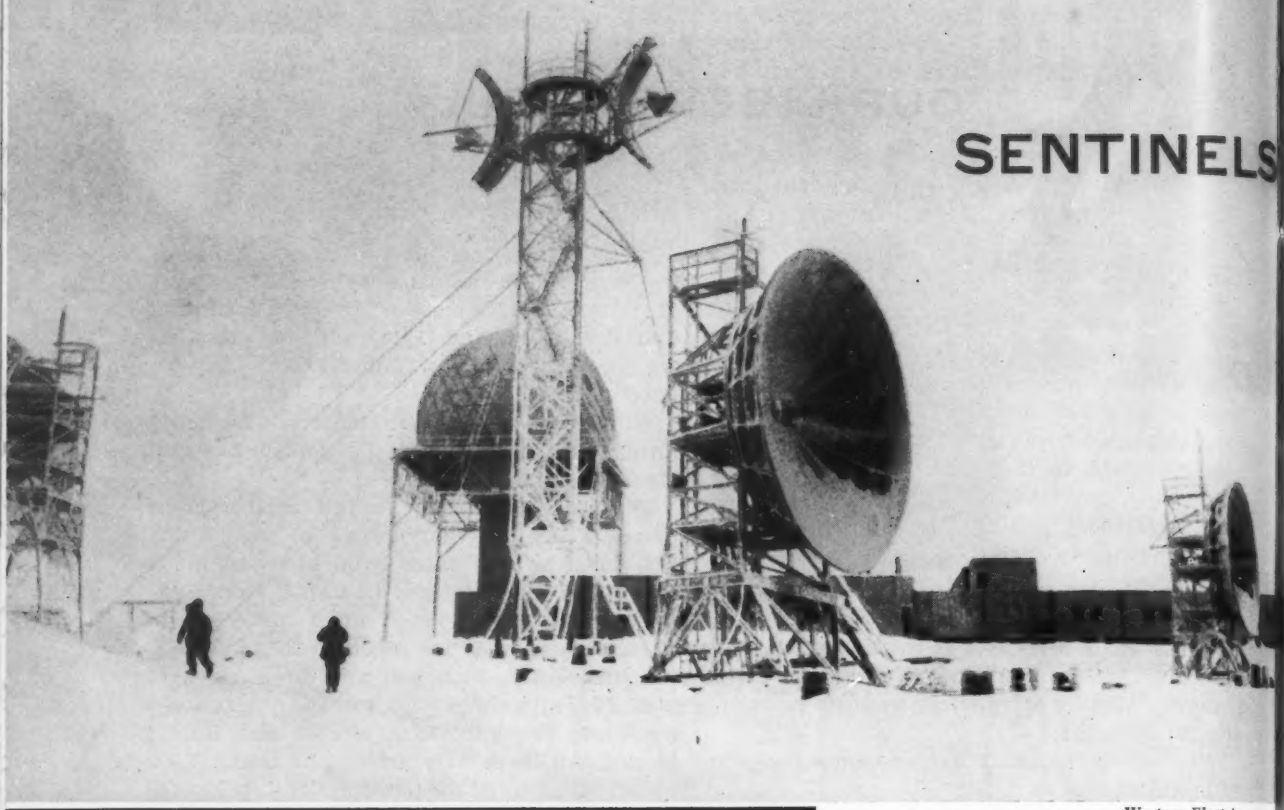
These three men, 24 years later, were among the signers of the Declaration of Independence. (July 4, 1776, the Declaration was approved without dissent by Congress, and signed by Hancock, president, and Thomson, secretary. Signatures of the 55 signers were affixed over a period of months, one being added as late as November.)

From its steeple in what is now Independence Hall, the Liberty Bell was rung on July 8, 1776, to assemble the people for the first public reading of the Declaration of Independence.

Today, still attached to a section of its original timbers, the Liberty Bell is the hallowed center of interest in the new Independence National Historical Park, portrayed on the Journal's back cover.

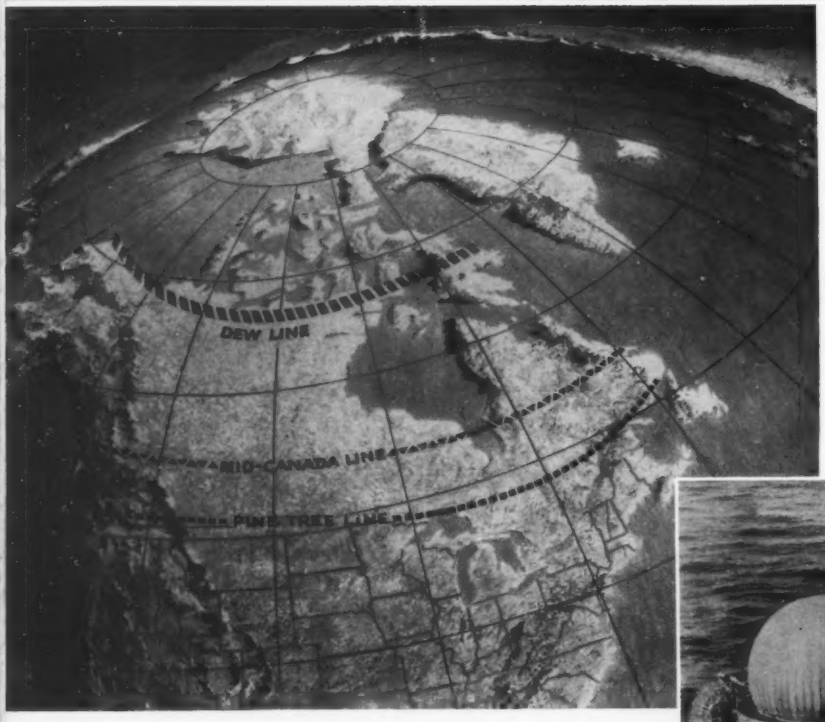
Close by, in the Contributionship's building and grounds adjoining the Independence Park area, the Hand-in-Hand firemark is seal and badge of the country's oldest business corporation of any kind, symbolizing as nothing else could that mutual insurance is fulfilling all Franklin and other founders envisioned for it. ⊙

SENTINELS A



Western Electric

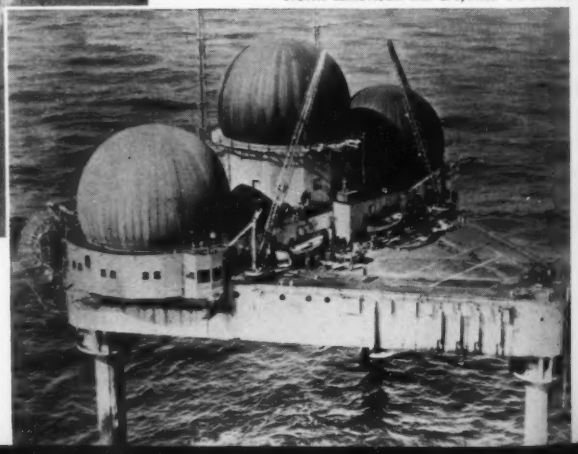
Forbidding deterrents to airborne attack, the DEW Line stations, radar and radio ever alert, stand forlornly in forbidding Arctic bleakness.



Now being joined with the DEW Line and its adjuncts is the new BMEWS, fully expected to be "available and operating before the Russians have decisively a militarily effective ICBM capability." Here, too, is a spaceman's view of a vastly rich area now opened up at last.

One of the radar stations, 100 miles offshore, in the NORAD systems. Picket ships and radar picket planes fulfill the 24-hour surveillance.

North American Air Defense Command



ELS AGAINST SNEAKERY

DEW Line and BMEWS—

Our "sleepless" insurance for survival

JULY, the natal month of U. S. independence, this year heralds a new era of independence and competency Herculean as compared with anything of the past.

The singularly significant day is July 31, second anniversary of the completion, on schedule, of the DEW Line, a key unit in our continental defense against airborne objects over the polar region.

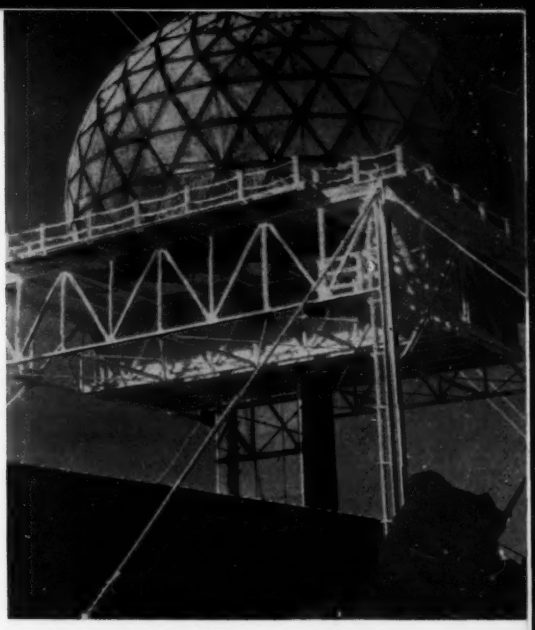
This July of 1959 has added significance of its own, with the BMEWS, the ballistic missile early warning system, being linked with the DEW Line and other units of the North American Air Defense in a top priority effort.

And in the Julys of futurity and a more peaceful world, the DEW Line and its adjuncts may well stand as monuments to the development of one of the earth's last frontiers. While insuring our independence born of the past, these projects also have blazed the trail to the opening up of the entire Canadian North—a vast and almost completely undeveloped region that many believe to be one of the free world's richest areas in natural resources. Already the DEW Line has helped Alaska prepare for her role as the nation's 49th state.

Over-all management of the DEW Line design and construction was handled by Western Electric, with the nation's insurance facilities always in the vanguard.

An estimated 1,500,000 people worked on DEW Line products. On direct work, three construction companies used a total of 20,000 people in a 2½-year period. Some 4,650 companies in the U. S. and Canada supplied materials and equipment. Enormity of the project may be gauged by the steel requirements alone—46,000 tons.

Western Electric was protected with public liability insurance provided by commercial insurance companies, and in the case of workmen's compensation is a qualified self-insurer. Subcontractors covered their own operations with public liability and workmen's compensation. ⊙



The heart of each DEW Line station, the huge rotating air-search radar antenna, is under a plastic, weather-protective dome.

From such radar sites, air defense information is relayed on a 24-hour schedule to NORAD headquarters, Colorado Springs.

At headquarters, incoming reports, plotted backwards on plexiglass screen, are analyzed by battle staff sitting out front.

Who said the CIRCUS is dead?

In this notable circus month, the Big Top flourishes anew.

"TO ROB ME of my memories of the circus would leave me as poor as those to whom life was a drab and hopeless round of toil."

Most Americans are just as circus-devoted as is Hamlin Garland in his *A Son of the Middle Border*. They can now be reassured that they are not going to be robbed of their circus memories or denied new thrills.

Insurance men busy servicing policies for workmen's compensation, public liability, fire, automobile, accident and health, and other protection for some 30 thriving circuses and their performers can produce the reassuring evidence.

The circus is healthy, prosperous, indoors, outdoors, booked up, coming—and, these days, motor-truck borne. Railroad shows in the traditional sense are no more, but they are about all the Big Top has lost.

Recent profits and current plans of circus operators put the lie to any "death" rumors still lingering from 1956. That's when John Ringling North was quoted as saying that the circus was dead. Last year was one of the most successful for all kinds of circuses, and signs this year point to added performers, new equipment, extra features and more animals. And consequently, extended insurance requirements.

The outline of today's circus business started taking shape after World War II, when indoor shows began to gain popularity. A significant trend started. To bolster advance sales as insurance against increased postwar business costs, there was a strong swing toward local sponsorship of indoor circuses.

Likewise mindful of the advantage of a guaranteed gate, under-canvas shows also began establishing temporary partnerships with local civic and community groups. Today, virtually all circuses perform part of the time, and some always, under local auspices.

The broadening of responsibility for a circus has an insurance twist; local promoters are behooved to make certain that the show appearing with their blessing is properly insured, and likewise that they are protected during its run. Through insurance flexibility, endorsements have provided a simple means of extending circus policy protection to sponsors and lot

Mercury Artists Corporation

Emmett Kelly, ace of clowns; these Big-Top stars are insurance-safe.

Insuring public safety, practically every state and municipality in the country requires modern big tops, such as at left and below, to be specially treated for fire-resistance.

Canvas Products Association International

owners who may share liability with the circus operator for a short time.

On the historical side, this month marks the 15th anniversary of circusdom's worst disaster and of insurance's most important service to the circus business and its people. On July 6, 1944, in Hartford, Connecticut, the Ringling Brothers and Barnum & Bailey Big Top suddenly became a raging holocaust. The toll: 163 dead, 261 seriously injured. Forestalling a financial shock, some 675 claims were honored, totaling nearly $4 million in insurance payments. Out of the Hartford tragedy came the widened application of fire-resistive techniques to canvas and stricter laws governing treatment and inspection of tents for public gatherings.

Two happier July circus events are current: in Baraboo, Wisconsin, the Circus World Museum opens its doors on July 1, while in Bridgeport, Connecticut, the P. T. Barnum Festival runs through July 5.

Housed in two of the Ringling Brothers' original winter quarters buildings, the Museum is a memory-storehouse for all circuses. Heavily endowed with tenting treasures, the building, equipment and contents are insurance-protected for almost $160,000. In addition, public liability protection is provided by a Wisconsin State Historical Society policy with the Hardware Dealers Mutual Fire Insurance Company, of Stevens Point.

And up at the Festival in Bridgeport, the citizens recall this: When he wasn't insuring his fame with new feats in showmanship, Phineas T. Barnum was insuring the future of their town through service in government, cultivation of industry and personal donations. ⊙

UPI

The Big Top's darkest day: July 6, 1944. Ringling catastrophe killed 163, resulted in $4 million in insurance payments.

Suggested 49-star designs deluged Interior Secretary Fred A. Seaton *(left)*, and Alaska's last territorial governor, Mike Stepovich. Final choice, seven staggered rows of seven stars each, will fly for first time at Independence Hall July 4.

Department of Interior

THERE'S NOW A NEW "OLD GLORY"

. . . and a newer one's on the way.

A NEW U. S. FLAG, fated to be a collectors' item even before it's flown, will be unfurled throughout a bigger-than-ever U. S. A. July 4.

Addition of the 49th star, for Alaska, is the first change in flag fashions since 1912. And since a 50th star, for Hawaii, is expected to be added to Old Glory next July 4, the 49-star banner has a life expectancy of just one year. Flag makers, first frantic about such early obsolescence, have found demand good for the potential museum piece.

Not since independence was won in 1776 has there been such a rapid turnover in U. S. flags —three different ones in a 367-day period, July 3, 1959, to July 4, 1960. Before independence, of course, there were dozens of flags: Pine Trees and Unions and Don't Tread on Mes. Among the colonists who designed them was Benjamin Franklin. His regimental flags date back to 1747, five years before his founding of mutual insurance in America, and a full 29 years before the first Independence Day.

It was June 14, 1777, the first Flag Day, when the Continental Congress adopted the original Stars and Stripes design proposed by its special committee: George Washington, Robert Morris and George Ross. The wife of Colonel Ross's nephew sewed the first one—13 five-pointed stars in a circle on a blue field, stripes of red and white. Remembered in history even better than the design is the seamstress, Betsy Ross.

So far the President hasn't selected a 50-star design, but there is no dearth of prospects. Suggestions keep pouring in. Meantime, University of Hawaii students couldn't wait; they picked their own design, had it all stitched up, and ran it up the campus flagpole last March 12—half an hour before Congress finished voting the territory into the Union. ⊙

Omaha World-Herald

Miss Betsy Ross, an employee of Guarantee Mutual Life Insurance Company, Omaha, Nebraska, and the great-great-great-great niece of the "original" Betsy, thinks 50 stars should be in a circle rather than rows in the new American flag. But someone else will have to sew it, she says. "I can sew buttons on a blouse, and that's about all."

Commissioner C. P. Thurman, NAIC Zone 3 Chairman, 1958-1959. His insurance career began near Lincoln's birthplace.

CLOSE-UPS OF OUR COMMISSIONERS

KENTUCKY'S THURMAN

"THERE ARE NOT ENOUGH bright Kentucky Derbies in any man's life," wrote the late Bill Corum. Blue grass state natives agree. And to back up the Derby fame of "Old Kentucky," they are putting some highspeed effort into industrial growth and insurance-type foresight.

Of natural gifts, the commonwealth has a surplus, so much so that an anonymous admirer once said, "Heaven is a Kentucky of a place." Witness Cumberland Gap, Mammoth Cave and 675 scenic miles of Ohio River, not to mention the "strongbox" of the nation's gold reserves, Fort Knox, and other economic muscle, principally in agriculture and mining.

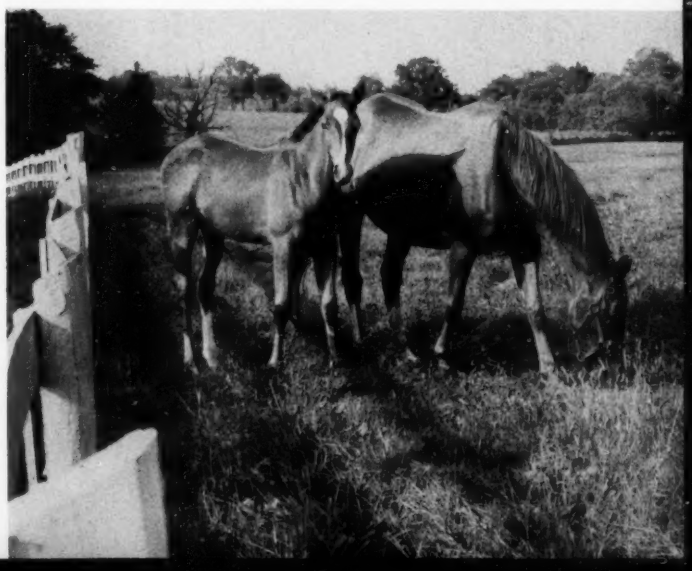
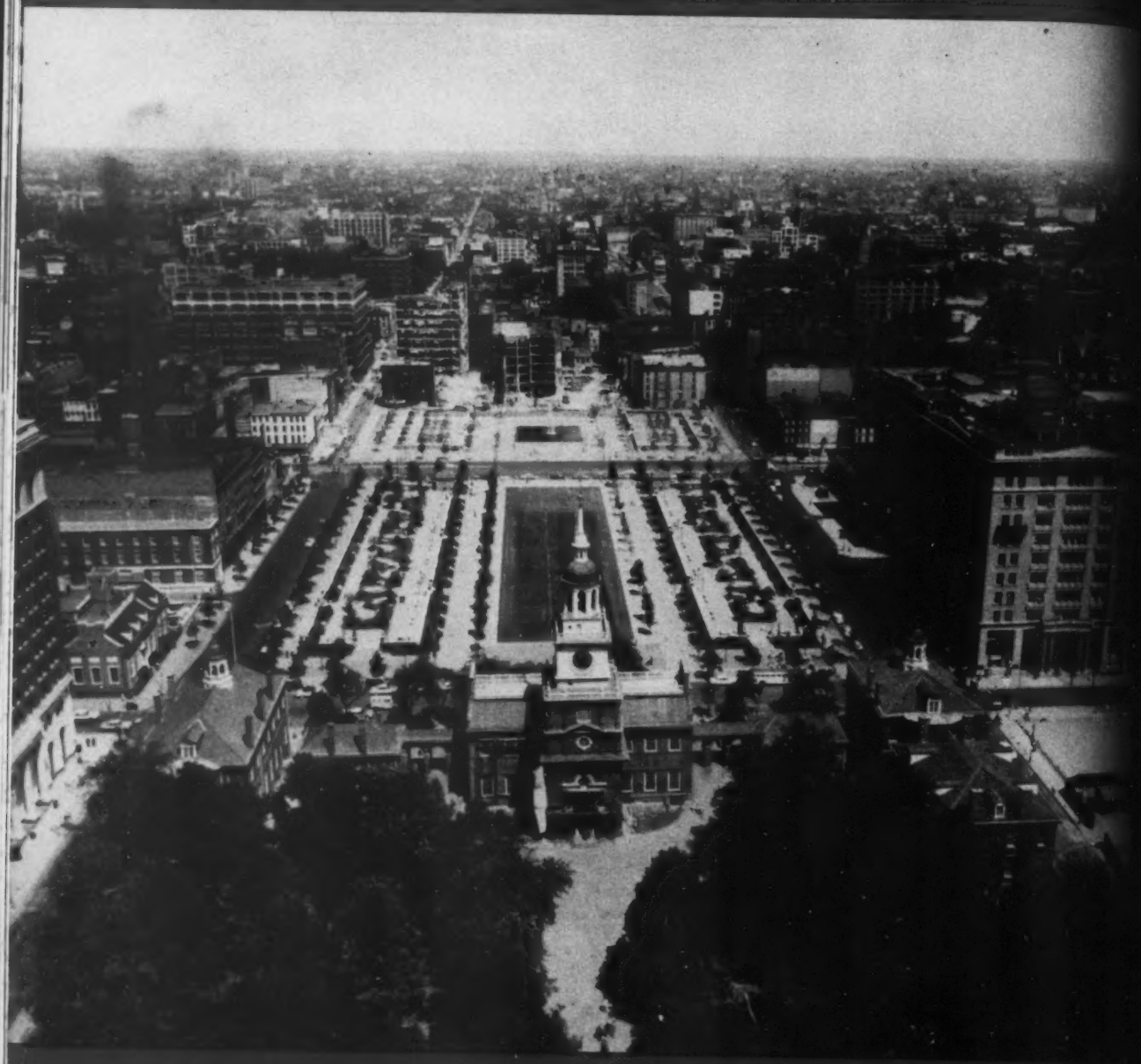
The state rate of industrial expansion over the past three years has been 25 per cent higher than during the prosperous decade following World War II. Since 1956, commitments for more than 250 new and expanded manufacturing plants total nearly a quarter of a billion dollars. When completed, this bit of looking to tomorrow will mean 20,000 new jobs with an annual payroll of around $80 million.

Thanks in part to her expanding economy, Kentucky was the only state to lower taxes in 1958, now ranks 42nd lowest in the entire nation.

With the economic upswing accompanied by increased activity in highways, public safety and health, Kentucky's insurance industry has had an expanding role. Total premiums have been rising about 10 per cent annually in recent years, with the overall climb for all lines well over 150 per cent since 1946.

Latest reported total annual premiums of nearly 700 firms doing business in the state ran to almost $314 million, with state revenue from insurance close to $6 million. In the fire and casualty branch of the industry, mutual firms during the past two reported years have racked up a 65.7 per cent increase in direct premiums, while stock companies were recording a corresponding rise of 15.8 per cent.

Re-appointed to his second term as Kentucky commissioner of insurance in December, 1955, C. P. Thurman first held the post from April, 1948, until May, 1949, at which time he resigned owing to illness. Thurman attended Western State Teachers College, taught school and was a banker in LaRue county before deciding on the insurance business. His first public office was master commissioner of the LaRue Circuit Court. He began his insurance career in 1927 in Hodgenville, the town near which Abraham Lincoln was born 150 years ago this sesquicentennial 1959.

A member of the Deer Park Baptist Church, Thurman is a Mason and belongs to the Shrine. Long active in Kosair Crippled Children's programs, he is a past president of the Highland Kiwanis Club, the Kentucky Fire Underwriters Association and the Kentucky Fire Prevention Association. ⊙

Kentucky's economy gets a $150 million a year boost from its two most famous products, bluegrass and thoroughbred horses.